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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KENNON R. COPELAND

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Appeal 2008-5595  
Application 09/714,387  
Technology Center 3600

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Decided: January 30, 2009

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*Before* HUBERT C. LORIN, DAVID B. WALKER, and JOSEPH A.  
FISCHETTI, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134 of the Examiner's Final Rejection of claims 1-19. We have jurisdiction under 35 U.S.C. § 6(b). (2002).

## SUMMARY OF DECISION

We AFFIRM-IN-PART.

### THE INVENTION

Appellant claims a system and method for estimating the daily sales of a product based on a sampling of sales data. (Specification 1:4-5.)

Claims 1, 7, 12, and 17, reproduced below, are representative of the subject matter on appeal.

1. A method for estimating sales volume of an item comprising:
  - collecting sampled sales data for a reference period;
  - receiving said sampled sales data in a central processor;
  - estimating total sales volume for the reference period by a computer program at least partially controlling said central processor;
  - parsing the reference period into a plurality of sub-periods;
  - collecting sampled sales data for a current sub-period of interest, the current sub-period of interest and collection of sampled sales data being later in time than the reference period;
  - matching the current sub-period to a corresponding sub-period from said plurality of sub- periods;
  - calculating a sub-period specific projection factor for the corresponding sub-period; and
  - applying said projection factor to said sales data from the current sub-period of interest to determine an estimate of total sales for the current sub-period.

7. A method of estimating daily sales volume comprising:  
calculating in a central processor a day of the week specific projection factor based on reference sales history data;  
sampling sales data for a current day of interest, said sampling of sales data occurring at an offset in time from the reference sales history data;  
storing said sampled sales data in a data storage device;  
scaling at least a portion of the sampled sales data for the current day of interest by the day of the week specific projection factor by a computer program at least partially controlling said central processor to determine an estimate of daily sales volume for the current day of interest.

12. A method for estimating daily sales volume of an item comprising:  
collecting sampled sales data from a first plurality of sources for a current day of interest;  
collecting sampled sales data for a reference week from a second plurality of sources, said reference week being offset in time from said current day by a predetermined time period;  
receiving said sampled sales data in a central processor;  
estimating total sales volume for the reference week by a computer program at least partially controlling said central processor;  
parsing the sampled sales data and estimated total sales volume for the reference week by day of the week;  
selecting the parsed sales data and estimated total sales volume data for the day of the week in the reference week that matches the day of the week of the current day of interest;  
calculating a day of the week specific projection factor for the current day of interest; and

applying said projection factor to said sales data for the current day of interest to determine an estimate of total sales for the day of interest.

17. A system for estimating sales volume of an item comprising:

a processor having a communications interface for coupling to a communications network to receive sales data from a plurality of retail points of sale;

a data storage device coupled to said processor, said computer data device storing sales data from a plurality of retail points of sale, including sampled sales data for a reference period and sampled sales data for a day of interest, said day of interest and collection of sampled sales data being later in time than said reference period;

a computer program at least partially controlling said processor to retrieve the sampled data for the reference period from said data storage device, to generate estimated total volume data for the reference period from said sampled data for the reference period, to generate a day of the week specific projection factor related to said day of interest from said estimated total sales volume data and sampled data for the reference period, and to apply the projection factor to the sampled data for the day of interest to estimate total daily sales volume for the day of interest.

## THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Felthouser	US 5,420,786	May 30, 1995
Takahashi	US 6,021,394	Feb. 1, 2000

Ando  
Landvater

US 6,032,125  
US 6,609,101 B1

Feb. 29, 2000  
Aug. 19, 2003

The following rejections are before us for review.

The Examiner rejected claims 1-4, 6-10, 12, 13, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Landvater.

The Examiner rejected claims 5, 11, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Landvater, in further view of Felthauser.

The Examiner rejected claims 14 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Landvater, in further view of Takahashi.

The Examiner rejected claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Landvater, in further view of Takahashi, and further in view of Felthauser.

## ISSUES

Has Appellant shown that the Examiner erred in rejecting claims 1-4, 6-10, 12, 13, and 17 on appeal as being unpatentable under 35 U.S.C. § 103(a) over Ando in view of Landvater on the grounds that: with respect to independent claim 1, the collected 13 month sales results data in Ando is collected sales data for a reference period and whether Ando and Landvater in combination teach estimating total sales volume for that reference period; with respect to independent claim 7, Ando teaches sampled sales data scaled by a projection factor to calculate the current total sales; and with respect to independent claims 12 and 17, that Ando and Landvater when taken together teach collecting sampled sales data from a plurality of different sources?

## FINDINGS OF FACT

We find the following facts by a preponderance of the evidence:

1. Ando discloses that a

product master F1 stores the 13-month sales results by a product read by an OCR (optical character reader) at the retail shop and transferred as in the POS system (point-of-sales system) together with the product code, marketing date (sales start date), sales stop date and stock amount.

(Ando, col. 4, ll. 34-38.)

2. The collected 13 month sales results data in Ando (FF 1) could be a sample of a larger period of time, e.g., a two year period. Thus we find that the 13 month sales results is collected sampled sales data as required by independent claims 1, 7, 12, and 17.

3. Appellant's Brief in the SUMMARY OF CLAIMED SUBJECT MATTER references the Specification at page 7, lines 11-14; page 10, lines 12-17; Fig. 2 for support for the phrase in claim 1 "estimating total sales volume for the reference period by a computer program at least partially controlling said central processor." (Appeal Br. 6.)

4. The Specification on page 10 lines 12-17 describes the estimating step as follows:

From the weekly reporting data, weekly projected sales volume estimate data are calculated in a known manner (step 206), such as by scaling the sampled data by the ratio of the number of pharmacies reporting data to the known total number of pharmacies. The weekly projected sales volume data are established for the reference week which has a predetermined delay with respect to the day of interest (X).

5. The Examiner found that the step of estimating total sales volume for the reference period is disclosed in Ando as part of the monthly forecast file F5. (Answer 4.)

6. Ando discloses that the monthly forecast file "... stores the summed value of weekly demand forecasting of one month as the demand forecasting value of the month." (Ando, col. 4, ll. 58-60.)

7. Ando discloses that

[t]he final forecast result pattern file F3 is a file, as will be described later in detail by a table in FIG. 2, storing the using pattern of every week in 18 weeks in future and the forecasting values by the patterns, which are selected on the basis of the comparison result of the forecasting result and real sales results in the last 18 weeks.

(Ando, col. 4, ll. 43-48.)

8. The Examiner found that Ando discloses a projection factor in the form of a forecasting value S13 (Answer 4).

9. In Ando the forecasting value S13 is disclosed in the context of scaling or modifying data in that:

...the process for obtaining the final forecasting result pattern is executed in the following procedure (S13). Reading the forecast result files F2 for the past 18 weeks sequentially, the forecasting value by each pattern for 18 weeks obtained by demand forecasting conducted every week is compared with the actual sales results value of every week, and the pattern outputting the forecasting value closest to the actual sales results value is extracted and obtained as the pattern of a comparison division (FIG. 2B).



(Ando, col. 5, ll. 38-46.)

10. Ando discloses that demand forecasting uses the final forecast result pattern file F3. (Ando, col. 5, ll. 12-17.)

11. The Examiner found that:

[b]oth Ando and Landvater are concerned with effective sales forecasting, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include collection of data being later in time than the reference period in Ando, as seen in Landvater, as an additional effective determination of sales forecasting, making the Ando system more robust.

(Answer 4-5.)

#### PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 (“While the sequence of these

questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

## ANALYSIS

All independent claims 1,7,12, and 17 are rejected under 35 U.S.C. § 103(a) based on Ando and Landvater. We reverse the rejections of claims 1-6, and 12-19, and affirm the rejection of claims 7-11 for the following reasons.

### *Claims 1-6*

Appellant's claim 1 recites "collecting sampled sales data for a current sub-period of interest" and "estimating total sales volume for the reference period by a computer program at least partially controlling said central processor." Appellant argues that:

... Ando discloses the use of "13-month sales results by a product ... at the retail shop" as reference data for forecasting. (*See* Ando, col. 4, lines. 34-42). Ando does not disclose or suggest the use of "sampled sales data" from a reference period to estimate the "total sales volume for the reference period," as recited in independent claims 1, 7, 12, and 17. Rather, total sales for a prior period are used as inputs into a computer model to forecast the total sales for a certain later period. (*Id.*, col. 5, lines. 41-44). No estimation is necessary.

(Appeal Br. 14.)

First, we are not convinced by Appellant's argument that the 13 month sales results stored in the product master F1 in Ando are not collected

sample sales data of a larger reference period, e.g., a two year period. Thus, initially we interpret the 13 month sales results in Ando as collected sampled sales data as required by the claims (FF 1, 2).

However, claim 1 further requires the step of *estimating total sales volume for the reference period*. The Specification describes this step as using weekly reporting data to calculate weekly projected sales volume estimate data (FF 3, 4). The Examiner found that the step of estimating total sales volume for the reference period is disclosed in Ando as part of the monthly forecast file F5. (FF 5). According to Ando, the monthly forecast file F5 “... stores the summed value of weekly demand forecasting of one month as the demand forecasting value of the month.” (FF 6). Demand forecasting uses the final forecast result pattern file F3 (FF 10). Thus, the monthly forecast file F5 is a function of the final forecast result pattern file F3.

We therefore cannot agree with the Examiner that Ando’s monthly forecast F5 is an estimation of total sales volume for the reference period. This is because the final forecast result pattern file F3, on which the monthly forecast file F5 is based, is a weekly created file and stores the using pattern of every week in *18 weeks in future*. Since the estimating step proposed by the Examiner uses the pattern files F3, and hence a reference period which is set for 18 weeks in the future (FF 7), the reference periods for the sample (the 13 month history) and the estimating step are not the same as required by the claims. We therefore reverse the rejection of claim 1.

With regard to remaining rejected dependent claims 2-6, because these claim rejections rely upon the underlying rejection of independent claim 1, we also reverse the Examiner’s rejection of these claims. *See In re*

*Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988) (If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim dependent therefrom is nonobvious).

*Claims 7-11*

Claim 7 does not recite the step of estimating total sales volume for the reference period in which sampled sales data is collected. But, Appellant argues that claim 7 recites “calculating in a central processor a day of the week specific projection factor based on reference sales history data” and that this “...recitation encompasses the steps of sampling sales data for a reference period and estimating total sales volume for the reference period.” (Appeal Br. 14.) Since claim 7 does not recite an estimating step, Appellant’s argument is not persuasive as to error in the rejection.

Appellant next argues that Ando does not

disclose or suggest the use of ‘sampled sales data’ scaled by a projection factor to calculate the current total sales, as recited in independent claims 1, 7, 12, and 17. (*Id.*, col. 5, lines. 41-44). Rather, Ando discloses a system wherein all sales for a prior period are input into a computer model to forecast the total sales for a certain later period.

(Appeal Br. 16.)

However, Appellant’s argument is not persuasive as to error in the rejection because as found *supra* (FF 1, 2) Ando discloses sampled sales data, and Ando discloses a scaling step (FF 9) which recalibrates or scales the sampled data to more accurately depict a forecast of actual sales for a given period.

Finally, in their pre-*KSR* Brief, Appellant argues that the Examiner has failed to point to any suggestion or motivation in either of the references or elsewhere that would lead a person of ordinary skill in the art to combine the disclosures of Ando and Landvater, and, even if there were a suggestion to combine, a person of ordinary skill in the art would not have a reasonable expectation of success in doing so.

(Appeal Br. 12). To the extent Appellant seeks an explicit suggestion or motivation in the reference itself, this is no longer the law in view of the Supreme Court's recent holding in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). Since the Examiner has provided some articulated reasoning with some rational underpinning for why a person with ordinary skill in the art would modify Ando (FF 11), Appellant's argument is not persuasive as to error in the rejection.

The rejection is also affirmed as to claims 8-11. The Appellant does not provide a substantive argument as to the separate patentability of claims 8-11 that depend from claim 7, which is the sole independent claim among those claims. Therefore, claims 8-11 fall with claim 7. *See*, 37 C.F.R. § 41.37(c)(1)(vii) (2007).

#### *Claims 12-16 and 17-19*

Claim 12 recites collecting sampled sales data from a first plurality of sources for a current day of interest; *and* collecting sampled sales data for a reference week from a second plurality of sources. Claim 17 similarly recites including sampled sales data for a reference period and sampled sales data for a day of interest. As found *supra* (FF 1, 2) Ando discloses only one source of sampled data, i.e., the 13-month sales results for a single product,

and the Examiner has not articulated how a person with ordinary skill in the art after looking to Ando and Landvater would use plural data sources as samples to forecast sales. Thus, the Appellant has shown that the Examiner erred in the rejection of independent claims 12 and 17.

With regard to remaining rejected dependent claims 13-16 and 18 and 19, because these claims are subject to rejections relying upon the underlying rejection of independent claims 12 and 17, respectively, we also reverse the Examiner's rejection of these claims. *See Fine*, 837 F.2d at 1074 (If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim dependent therefrom is nonobvious).

#### CONCLUSIONS OF LAW

We conclude the Appellant has shown that the Examiner erred in rejecting claims 1-6, and 12-19 under 35 U.S.C. § 103(a) as unpatentable over Ando in view of Landvater, and the Appellant has not shown the Examiner erred in rejecting claims 7-11 under 35 U.S.C. § 103(a) as unpatentable over Ando in view of Landvater.

#### DECISION

The decision of the Examiner to reject claims 7-11 is **AFFIRMED**.

The decision of the Examiner to reject claims 1-6, and 12-19 is **REVERSED**.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

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